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24 September '88

The Reverend Gary Hauch  
Curate, St. Thomas the  
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Wed 9th 12:30  
Church

Dear Gary,

As requested, I am providing some comments on the address of Mr. Christopher G. Brown, dated May 26, 1988, to the Parliamentary Standing Committee of Health and Welfare, and some of the issues raised thereby.

First of all, I imagine, as does Mr. Brown, that many people, including the Minister of Health and Welfare, are sympathetic to the discomfort and illnesses suffered by the environmentally sensitive. I also agree with Mr. Brown that a large number of persons, not including myself, believe that the problems of the environmentally sensitive are imagined or at least not that serious. I also agree with Mr. Brown that the adverse effects of environmental pollution on humans could be more widespread in our society than is currently recognized.

It would be helpful, therefore, if the problem or at least the potential of a problem, could be acknowledged by more people in positions of responsibility.

With respect to the effects of indoor air pollution, for example, we are all aware of our desire, after being 'cooped up' in 'stuffy' indoor climates for a while, to want to step outside for a breath of 'fresh' air. Further, many of us are also uncomfortably aware that we are spending more of our time indoors than ever, this tendency being encouraged by the ever-increasing availability of indoor environments to encompass all walks of our life, from shopping malls to indoor sports facilities to rapid transit systems.

Studies are now beginning to show that in some non-industrial spaces, occupant perceived 'stuffy or stale' air is associated with an excess occurrence of headaches, mental fatigue, eye and throat irritation, and so on - symptoms which appear when people enter the particular indoor environment and disappear when they leave.

Headaches, for example, which might be attributed to poor indoor air by 10% of the population in one building, could be thought by 30% of the occupants of another building to be attributable to poor air quality. This latter building would, in the current jargon, be classified as a 'sick' building. We have no idea how many sick buildings there are in Canada, but we do know that occupant requests for indoor air quality and ventilation investigations are widespread in North America and Europe. Hence the coining of the phenomenon of the 'Sick Building Syndrome (SBS)'.

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The specter of the SBS is broader than one of health alone, however, since in the short term at least, most of us do not book-off sick from such symptoms. The immediate and broader concern is one of potentially widespread reductions in normal human productivity in non-industrial environments. For example, the Building Owners and Managers Association in Washington, has reported from a recent survey which that organization has conducted, that occupants who identify adverse air quality effects, and this is a widespread concern, felt that their normal productivity had been reduced by this factor by some 26%.

A great deal of sophisticated and methodical research is required to establish dose-response information for the variety of indoor air pollutant combinations, and influencing factors such as humidity, temperature and air motion, so that we can define, in chemical and microbial terms, what is fresh air and what is stale, and what is societally acceptable and what isn't. In the meantime, we need to work at developing marketable, low pollution, environmentally comfortable buildings.

Both of these research thrusts have begun internationally. However, in Canada we currently have no organized scientific program in either area. It seems to me that we should be using the time during the current lull between energy crises, when ventilation rate reductions are not an economic or strategic priority, to better understand the human impacts of indoor air pollution and the implications of further reducing indoor-outdoor air exchange.

The above discussion has been based on my knowledge of the indoor air quality issue. You may want to have others advise you on water and food quality issues with respect to the concerns raised by Mr. Brown. If so, I can suggest some persons if you wish.

I am enclosing a copy of a recent over-view paper which I have written on the subject of indoor air quality as it relates to Canadian activities, along with some First Announcements of an up-coming major international conference on the topic. The staging of this conference in Canada in 1990, gives us all an opportunity to make use of the knowledge of the international science community to address some specifically Canadian concerns and to increase official awareness of the matter. I welcome inputs and support from concerned individuals and organizations in developing the program for and staging of this conference.

I am, of course, available to the Church to discuss this topic further.

Faithfully yours,



Douglas S. Walkinshaw, Ph.D., P.Eng.  
Member, St. Thomas the Apostle Anglican Church, and  
President, The 5th International Conference on  
Indoor Air Quality and Climate: INDOOR AIR'90  
Enclosures:

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